

REMARKS

Upon entry of the amendment, claims 7-15 will be all the claims pending in the application, of which claims 7-9 are withdrawn as being directed to a non-elected invention.

Claims 7 and 9 have been amended in view of the cancellation of claim 6. Claims 11-15 have been added corresponding to cancelled claims 2-6, respectively, except for depending on claim 10.

Entry of the above amendment is respectfully requested.

Priority

On the Office Action Summary page, the Examiner has neither acknowledged Applicants' claim for priority nor indicated that the certified copies of the priority documents have been received.

Since priority was claimed when the application was filed, and since the certified copies of the priority documents were filed on December 3, 2001, Applicants respectfully request that the Examiner acknowledge Applicants' claim for priority and indicate that the certified copies of the priority documents were received.

Obviousness Rejection

On page 2 of the Office Action, in paragraph 2, claims 1-6 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over either of the patents to Suzuki et al (USP 5,866,507 and USP 5,952,263).

The Examiner's Position

The Examiner's position is that the Suzuki et al patents teach a heat-sensitive recording material having a protective layer over the heat-sensitive recording layer, wherein the protective layer can contain stearic amide (see '507 at col. 5, lines 28-32, 39 and 40 and '263 at col. 6, lines 13-18, 23 and 24). The Examiner asserts that the experimental modification of this prior art in order to ascertain optimum operating conditions (e.g., determine the amount of stearic amide employed) fails to render Applicants' claims patentable in the absence of unexpected results.

Applicants' Response

Applicants respectfully submit that the present invention is not obvious over the cited art, and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

As described in the present application on page 3, lines 10-22, since high energy recording with a high black ratio is conducted in images of medical applications, a thermal head is worn, which changes a thermal conduction property from a head-heating element, whereby unevenness in density occurs. It has been proposed to provide a layer containing chemically stable carbon having a high hardness as a main component on the surface of the head to prevent wearing of the thermal head. However, the carbon layer has such characteristics that a surface energy is lower than the surface layer of a conventional thermal head, which increases a friction coefficient with the protective layer of the heat-sensitive recording material, and increases the problems of sticking and noise.

The heat-sensitive recording process of the present invention solves the above problems by using a combination of a specific heat-sensitive recording material and a thermal head which has an uppermost layer having a carbon content of at least 90%.

According to the present invention, wearing resistance of a thermal head is significantly increased, in addition to the achievement of decreasing the problems of sticking and noise.

Applicants submit that the comparative data included in the Rule 132 Declaration filed concurrently herewith clarifies the characteristics of claim 10 of the present application and shows that the present invention provides unexpectedly superior results.

Further, Applicants submit that neither of the patents to Suzuki et al., U.S. Patent No. 5,866,507 and U.S. Patent No. 5,952,263, teach or suggest, either independently or in combination, the feature of the thermal head which has an uppermost layer having a carbon content of at least 90%, as recited in present claim 10.

Thus, Applicants submit that the present invention is not even prima facie obvious, in addition to it not being obvious because it provides unexpectedly superior results.

Therefore, Applicants submit that the art rejection has been overcome, and withdrawal of this rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

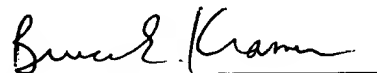
AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 09/942,029

Attorney Docket No.: Q64677

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Bruce E. Kramer
Registration No. 33,725

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: July 15, 2003